

**Report of Anderson Memorial Hospital  
Anderson, South Carolina**

**By**

**William M. Ewing, CIH  
January 15, 2007**

**INTRODUCTION**

I have been engaged by the Law Firm of Speights & Runyan to provide expert testimony concerning asbestos containing materials manufactured by W. R. Grace & Co., located within the Anderson Memorial Hospital. I am prepared to offer fact and opinion testimony regarding my evaluation of the asbestos-containing materials in the hospital building, my opinions regarding the actions taken by Anderson Memorial Hospital to prevent or minimize hazardous exposures, including the use of an operations and maintenance program, personnel training and the removal of asbestos containing materials. I may also offer testimony regarding my opinions of the releasability of asbestos fibers from Monokote fireproofing in the Anderson Hospital building and my opinions regarding material testing techniques, air sampling techniques, fiber counting techniques, and the techniques of measuring release ability of fibers. My testimony will be based in part upon my inspection of the Anderson Memorial Hospital building and my review of bulk and debris sampling from the hospital.

**QUALIFICATIONS**

I am Technical Director for Compass Environmental, Inc., located in Kennesaw, Georgia, located at 1751 McCollum Parkway, NW, Kennesaw, GA 30144-5908. I am certified in the comprehensive practice of industrial hygienist by the American Board of Industrial Hygiene. I received my core certification in 1980 and my Comprehensive Practice Certification in 1983. I obtained a Bachelor of Science degree from Washington & Lee University in 1978. Since that time I have undertaken additional course work at the graduate level in statistics, technology and science policy, and other related subjects at the University of Michigan, Georgia State University and the Georgia Institute of Technology.

Since 1978 I have been a practicing Industrial Hygienist. This field specializes in the recognition, evaluation and control of occupational and non-occupational health hazards. Much of my work is focused on asbestos in buildings, including inspection, management, and remediation practices and procedures. During 1978 through 1982, I routinely performed building inspections for asbestos containing materials as an employee of a nationwide environmental consulting firm. From 1982 through 1987, I was the director of the Asbestos Programs Group at the Georgia Tech Research Institute.

While at the Institute I directed the first EPA sponsored asbestos information center in the country. I conducted research and training in this field. I directed over fifty (50) courses on asbestos in buildings throughout the US and Europe. I have surveyed well over one-thousand (1000) buildings during my career. I have participated in projects sponsored by public and private schools, universities, state and local governments, and many federal agencies, including the Atlanta Public School System, the Los Angeles Unified School District, the Indianapolis Public School District, the Florida Department of Education, the Department of Defense, the General Services Administration, the Army Corps of Engineers, the US State Department, and the EPA, as well as many others.

I have authored or co-authored over twenty (20) technical publications or papers addressing asbestos in buildings. Among these publications are portions of eight (8) EPA Training Manuals for asbestos inspectors, management planners, asbestos abatement supervisors, and abatement project designers. These manuals are used to instruct individuals wishing to become accredited to perform asbestos related work in schools under the EPA Asbestos Hazard Emergency Response Act (AHERA) regulations for schools.<sup>1</sup>

I have served on numerous peer reviewed committees for the EPA, National Institute for Occupational Safety and Health (NIOSH), US Navy, Health Effects Institute-Asbestos Research (HEI-AR), US Army, General Services Administration (GSA), Veterans' Administration, and other organizations. I was appointed by the EPA to serve as Technical Advisor to the Regulatory Negotiation Committee during preparation of the AHERA Regulations for asbestos in schools. I served in a similar capacity at the EPA's request during the public policy dialog on asbestos in public and commercial buildings. I served on the New York City Department of Environmental Protection Asbestos Expert Advisory Committee regarding asbestos in all buildings in New York City. I worked on the congressional-mandated study, "Asbestos in Schools: Evaluation of the Asbestos Hazard Emergency Response Act." This study involved revisits to hundreds of schools nationwide to determine how well the schools have implemented these regulations, and how effective the regulations have been. I have conducted research on the mechanisms of asbestos exposure in buildings. I have participated in numerous studies designed to evaluate episodic exposures to individuals in buildings. Much of my work is focused on the contribution to overall exposure to maintenance, custodial and service workers from asbestos containing dust and debris in buildings.

My opinions are based on my own experience, my own research and research performed others, as well as a review of technical literature related to the subject of asbestos in buildings and exposures to individuals from in-place asbestos containing materials and debris. My opinions are also based upon my inspection of Anderson Memorial Hospital and review of relevant data from the hospital. The opinions which I offer are all offered to a reasonable degree of scientific certainty.

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<sup>1</sup> 40 CFR 763, Appendix C.

## REPORT

At the request of Mr. Bud Fairey of Speights & Runyan I inspected the Anderson Memorial Hospital buildings in Anderson, SC on December 29, 1993, January 10, 1994 and April 15, 1998. Additional inspection visits were made by other from Compass Environmental, Inc. on May 5, 1994, February 27, 1996, May 27, 1996, and March 11-12, 1998. The main building is a multi-level hospital with multiple additions.<sup>2</sup>

Bulk sampling of the spray-applied fireproofing identified the material as asbestos-containing. Constituent analysis conducted under the direction of William E. Longo, Ph.D. determined the fireproofing to be Mono-Kote (MK-3) brand manufactured by W. R. Grace & Co.<sup>3</sup> This confirmed the previous analyses conducted under the direction of James R. Millette, Ph.D.<sup>4</sup> The fireproofing was spray-applied to columns and beams. Overspray was observed throughout. The fireproofing was assessed according to the U.S. Environmental Protection Agency (USEPA) Asbestos Hazard Emergency Response Act (AHERA) assessment methodology as damaged friable surfacing asbestos-containing building material (ACBM). Loose fireproofing debris was observed on ceiling tiles.

The asbestos-containing fireproofing in this building is subject to the USEPA National Emission Standard for Hazardous Air Pollutants (NESHAP) for asbestos.<sup>5</sup> The regulations require the friable asbestos-containing fireproofing be removed from the building prior to renovation or demolition activities that disturb the material. In South Carolina these regulations are enforced by the South Carolina Department of Health and Environmental Control (SC DHEC). The hospital and its contractors are also subject to the Occupation Safety and Health Administration (OSHA) asbestos regulations. These regulations are designed to reduce exposures in the workplace from the asbestos-containing material. The regulations require certain work practices be followed; protective equipment be provided when appropriate; notification and training of affected parties; labeling of asbestos-containing materials, areas with asbestos, and asbestos waste; and other provisions.

Building owners have an obligation to eliminate or minimize exposure to asbestos in their facilities. Building owners can do this through implementation of an asbestos management program. An asbestos management program is a collection of procedures and special work practices designed to minimize asbestos exposures while the asbestos-containing material (ACM) remains in the building. The asbestos materials are typically removed during planned renovation activities or at building demolition. Anderson Memorial Hospital was under such a program at the time of the inspections.

<sup>2</sup> See architectural drawings, J. Harold Mack & Associates, 408 N. Church St., Greenville, SC; and ASC Consultants, Inc., Waynesville, NC, "Asbestos Inspection Report for Anderson Hospital," November 1989.

<sup>3</sup> Materials Analytical Services, Inc. Letter Report to Marion C. Fairey, Jr. re: Anderson Hospital, October 6, 1997.

<sup>4</sup> MVA, Inc. Report MVA0781, Anderson Medical Center, Main Building, April 13, 1994.

<sup>5</sup> USEPA, National Emission Standard for Hazardous Air Pollutants (NESHAP), Asbestos, 40 CFR Part 63, Subpart M.

I have participated in several studies designed to evaluate exposures during various maintenance and remodeling activities in buildings. One study was designed to evaluate exposures during the installation of cables above suspended ceilings in buildings with exposures during the installation of cables above suspended ceilings in buildings with Mono-Kote asbestos-containing fireproofing. The study was repeated to see if the results were reproducible.<sup>6</sup> In the first study the activity resulted in an increase in the airborne concentration 590 times the concentration before the activity ( $p < 0.0001$ ). In the replicate study the increase was 520 times ( $p < 0.0001$ ).

During 1980-1981 I participated in a study of 11 office buildings with friable spray-applied structural fireproofing to characterize exposure during renovation activities.<sup>7</sup> A total of 184 personal air samples were collected on carpenters, electricians, sheet-metal workers, and painters. The geometric mean exposures for these four job classifications were  $0.13 \text{ f/cm}^3$ ,  $0.13 \text{ f/cm}^3$ ,  $0.19 \text{ f/cm}^3$ , and  $0.08 \text{ f/cm}^3$ . The results found that 87.5% of the samples were above  $0.1 \text{ f/cm}^3$ , and 6 % were above  $2.0 \text{ f/cm}^3$ . Removal of the fireproofing was not part of these renovation activities. This study demonstrated the episodic nature of exposures generated as a result of specific activities.

A series of eight studies were published in one article by Keyes, et al. in November 1994.<sup>8</sup> This article looked at exposures during various custodial and maintenance activities in buildings with asbestos-containing surface treatments (acoustical plaster or fireproofing). This article confirmed again that direct disturbance of in-place friable ACM or the dust/debris from those materials can result in significant increase in asbestos exposure.

In my opinion the Mono-Kote fireproofing in the Anderson Memorial Hospital building in Anderson, South Carolina released asbestos-containing dust and debris onto surfaces throughout the building. This fiber release, and the potential for resuspension of the asbestos dust from surfaces, is a source of exposure that must be controlled or eliminated. The in-place fireproofing itself is a source of exposure when directly disturbed. It was necessary and appropriate that an asbestos management program and an asbestos removal program be implemented to reduce exposures to asbestos from this fireproofing.

I hold the opinions expressed herein to a reasonable degree of scientific certainty. I also intend to rely upon my report, "Application and Use of Dust Sampling for Asbestos," dated December 7, 2005, previously submitted. I intend to illustrate my testimony using photographs taken in the Anderson Memorial Hospital.

<sup>6</sup> Keyes, D.L., et al., "Exposure to Airborne Asbestos Associated with Simulated Cable Installation Above a Suspended Ceiling," *American Industrial Hygiene Association Journal*, Vol. 52, No. 11, 1991, pp.479-484.

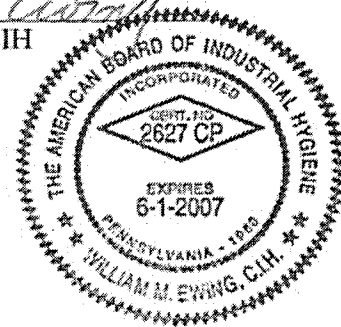
<sup>7</sup> Paik, N.W., et al., "Worker Exposure to Asbestos During Removal of Sprayed Material and Renovation Activity in Buildings Containing Sprayed Material," *American Industrial Hygiene Association Journal*, vol. 44, No. 6, 1983, pp.428-432.

<sup>8</sup> Keyes, D.L., et al., "Baseline Studies of Asbestos Exposures During Operations and Maintenance Activities," *Applied Occupational and Environmental Hygiene*, Vol. 9, No. 11, November 1994, pp.853-860.

### **BASES OF OPINIONS**

My opinions regarding the conditions in the Anderson Memorial Hospital as well as my general opinions regarding friable asbestos containing materials such as those manufactured by W. R. Grace & Company are based upon my training and experience as a Certified Industrial Hygienist, my extensive professional experience and training, my development of training materials and conducting training for the Environmental Protection Agency, numerous school districts, the General Service Administration, the Department of Defense, the Army Corps of Engineers and the US State Department. Additionally, my opinions with respect to Anderson Memorial Hospital were based upon my own inspections of those facilities, inspections performed by others at Compass Environmental, Inc.

  
William M. Ewing, CIH



**WILLIAM M. EWING, CIH**  
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**1751 McCollum Parkway**  
**Kennesaw, Georgia 30144**

***Education***

B.S., Biology, Washington and Lee University	1978
Courses in Management, Statistics, Technology and Science Policy (University of Michigan, Georgia State, Georgia Tech)	1978-1988
Short courses in industrial hygiene, toxicology, indoor air quality environmental site assessments, asbestos evaluation and control	1978-Present

***Employment History***

Compass Environmental, Inc.	1993-Present
Technical Director	
Diagnostic Engineering Inc.	1990-1993
Regional Technical Director	
The Environmental Management Group, Inc.	1987-1990
Executive Vice President	
Georgia Tech Research Institute	1981-1987
Research Associate II	
Clayton Environmental Consultants, Inc.	1978-1981
Industrial Hygienist	

***Experience Summary***

Mr. Ewing is the Technical Director for Compass Environmental, Inc. In this capacity he serves as project manager for industrial hygiene and indoor air quality studies and assessments. His technical responsibilities include project design, execution and report development for private and government project sponsors. He is also responsible for research studies, preparation of papers and publications, and quality assurance. He was the Executive Vice President of The Environmental Management Group, Inc. (TEMG) prior to its acquisition by Diagnostic Engineering Inc. (DEI), where he served as Regional Technical Director. While at the Georgia Tech Research Institute (GTRI) he started the industrial hygiene laboratory, instituted the hazardous waste program for small business in Georgia, and served as an industrial hygienist under the 7(c)(1) program, sponsored by the Occupational Safety and Health Administration (OSHA). As Director of the Asbestos Programs Group, he conducted training, technical assistance, and research on asbestos in buildings, under the sponsorship of the U.S. Environmental Protection Agency (USEPA).

During the past 25 years Mr. Ewing has conducted numerous industrial hygiene, asbestos management, and indoor air quality studies. In the field of industrial hygiene he has conducted over 300 field investigations including textile mills, foundries, steel mills, health care facilities, chemical plants, and manufacturing operations. Among the indoor air quality projects, his experience includes office settings, hospitals, and studies involving off-gassing of volatile compounds from products. He has served as a consultant to the Centers for Disease Control (CDC) on airborne microbial contamination, and is currently an industrial hygiene consultant to the U.S. Public Health Service. He is currently a consultant to the Georgia Building Authority where he conducts IAQ investigations and authored the State of Georgia IAQ manual. Since 1980, he has conducted environmental assessments for property owners, developers, mortgage bankers, and insurance companies. In the field of asbestos management and control, he has conducted surveys of over 1500 facilities, including commercial office buildings, schools, hospitals, ships, industrial plants, and government facilities.

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During the past 20 years, Mr. Ewing has frequently directed or lectured in training courses sponsored by universities, government agencies, and private interests. Topics have included respiratory protection, asbestos identification, evaluation, management, and control, advanced microscopy, polychlorinated biphenyls (PCBs), heavy metals, air pollution, industrial hygiene, and indoor air quality. He has directed over 50 courses and lectured in over 200 others throughout the continental United States, Alaska, Canada, and Europe.

Mr. Ewing participated in the site assessment of the aircraft carrier *USS Lexington* and development of its environmental management plan prior to its opening as a naval history museum. Much of this work involved PCBs, lead-based paint and asbestos identification and management. Mr. Ewing was responsible for preparing the Safety, Health and Emergency Response Plan (SHERP) and Contractor's Chemical Quality Control Program (CCQCP) for the fire site clean-up at Ft. Huachuca, Arizona. He has also conducted several studies related to flood or fire remediation in commercial and industrial facilities. Since 1988, he has participated in a series of studies designed to evaluate episodic exposures resulting from maintenance and custodial activities in buildings containing asbestos.

#### ***Certifications***

American Board of Industrial Hygiene (ABIH)	1983
Certified Industrial Hygienist, Comprehensive Practice	
(Certificate No. 2627, Recertified 1990, 1995, 2002)	
Indoor Environmental Quality Sub-specialty Exam	1993
Inspector, pursuant to USEPA Asbestos Hazard Emergency	1987-Present
Response Act (AHERA) regulations (40 CFR 763, Subpart E,	
Appendix C), Certificate No. 092, Georgia Institute of Technology;	
Current Certificate No. 3756-A, The Environmental Institute	
Management Planner, pursuant to USEPA AHERA regulations,	1987-Present
Certificate No. 083, Georgia Institute of Technology; Current	
Certificate No. 3756-A, The Environmental Institute	
Project Designer, pursuant to USEPA AHERA regulations,	1989-Present
Certificate No. 1438, The Environmental Institute; Current	
Certificate No. 1278-A, The Environmental Institute	
Project Supervisor, pursuant to USEPA AHERA regulations,	1987-Present
Certificate No. 3400, Georgia Institute of Technology;	
Current Certificate No. 3891-A, The Environmental Institute	
State of Florida, Department of Professional Regulation, Licensed	1989-Present
Industrial Hygienist/Asbestos Consultant (No. IA 0000003)	

#### ***Awards and Honors***

Georgia Tech Research Institute Award for Outstanding	1983
Performance in Program Development	
Commissioned Lieutenant Colonel, Aide de Camp, Governor's Staff	1985
by Governor Joe Frank Harris (State of Georgia)	
National Asbestos Council, President's Award Recipient	1987
National Asbestos Council, Outstanding Achievement Award	1988
Environmental Information Association, President's Award	1993
Elected Fellow Member Status, American Industrial Hygiene Association	1995
Practices Standards and Guidelines Committee Award, American Industrial Hygiene Association	2005

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### *Memberships*

American Industrial Hygiene Association (AIHA)	1978-Present
American Industrial Hygiene Association, Georgia Local Section	1979-Present
American Academy of Industrial Hygiene (AAIH)	1980-Present
American Conference of Governmental Industrial Hygienists (ACGIH)	1992-Present
American Society for Testing and Materials (ASTM)	1992-Present
Environmental Information Association (EIA)	1992-Present
International Society for Indoor Air Quality	1993-Present
National Asbestos Council (NAC)	1982-1992
National Institute for Building Sciences (NIBS)	1988-Present
New York Academy of Sciences (NYAS)	1987-Present

### *Offices Held*

Environmental Information Association Georgia Chapter President	1997-1998
American Industrial Hygiene Association Secretary, Georgia Local Section	1985-1986
Environmental Information Association Treasurer	1992-1993
National Asbestos Council Board of Directors	1984-1986, 1988-1991
Secretary	1982-1983
Treasurer	1986-1987

### *Committees*

American Industrial Hygiene Association Air Pollution Committee	1983-1984
Asbestos Task Force	1985
Indoor Environmental Quality Committee Chair	1984-1986 1985-1986
Member/Corresponding member	1992-Present
Chair, Regulatory Affairs Subcommittee	1995-1998
Policy, Standards & Guidelines Committee	1998-2005
Secretary, Vice Chair	2002-2003
Chair, Past Chair	2004-2005
<i>AIHA Journal</i> Peer Reviewer (as requested)	
International Council for Building Research Studies and Documentation Task Group for Dissemination of Indoor Air Sciences	1998-Present
National Asbestos Council Sampling and Analytical Committee	1984-1986
Professional Registration Committee	1988-1990
Publications Committee	1983-1990
Conference Committee, Chair of Professional Development Courses San Antonio and Phoenix Conferences	1989-1990
National Institute for Building Sciences Asbestos Task Force	1985-1988
Model Specifications Peer Review Committee (asbestos)	1988-1992, 1994-1996



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Lead Based Paint Model O&M Manual Project Reviewer	1994
U.S. Environmental Protection Agency (USEPA)	
Asbestos NESHAP External Advisory Committee	1985-1986
Evaluation of Asbestos Control Technologies (Peer Review)	1985-1987
AHERA Regulatory Negotiation Committee, Invited Technical Advisor	1987
Policy Dialogue on Asbestos in Public and Commercial Buildings,	1989-1990
Co-chair of Technical Working Group	
Asbestos Strategies Blue Ribbon Committee	2002-2003
Publication Peer Review (USEPA)	
"Measuring Airborne Asbestos Following An Abatement Action"	1984-1985
Publication No. EPA 600/4-85-049 (November 1985)	
"Guidelines for Conducting the AHERA Clearance Test to Determine Completion of an Asbestos Abatement Project" (1989)	1987-1988
"Guidance for Preventing Asbestos Disease Among Auto Mechanics,"	1985-1986
Publication No. EPA-560-OPTS-86-002 (June 1986)	
"Interim Procedures and Practices for Asbestos Abatement Projects,"	1984-1985
Publication No. EPA 560/1-85-002 (June 1985)	
National Institute for Occupational Safety and Health (NIOSH)	
Publication Peer Review	
"A Guide to Respiratory Protection for the Asbestos Abatement Industry,"	1985-1986
Publication No. NIOSH/EPA 560-OPTS-86-001 (September 1986)	
"An Evaluation of Glove Bag Containment in Asbestos Removal,"	1987-1988
Publication No. DHHS(NIOSH) 90-119 (October 1990)	
Department of the Navy, Naval Facilities Engineering Command	
Publication Peer Review	
"Removal and Disposal of Asbestos Materials," NAVFAC Guide Specification	1985
NFGS-02080 (May 1985)	
<i>Asbestos Monitor</i>	
Editorial Review Board	1988-1993
City of New York, Department of Environmental Protection (NYC/EPD)	
Expert Advisory Board	1987-1988
American Society for Testing and Materials (ASTM)	
D22 Committee on Sampling and Analysis of Atmospheres	1992-Present
D22.07 Asbestos	1992-Present
E-6 Performance of Buildings	
Subcommittee 23, Lead Hazard Abatement	1994-Present
Health Effects Institute (HEI)	
Research Advisory Committee	1988-1989
Environmental Information Association (EIA)	
Editorial Review Board (Peer Reviewer)	1992-Present
Asbestos Committee (Co-Chair)	1992-1998
	1998-2000
Building Owners and Managers Association (Asbestos Committee)	1987-1989

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US Army Corps of Engineers, Facilities Engineering Support Agency 1984-1985  
Publication Peer Review  
"Asbestos Management and Control Handbook," TRADOC, Ft. Monroe, VA

***Papers and Formal Presentations***

"Formaldehyde Testing in New and Occupied Mobile Homes," paper presented at the University of Texas, Austin, TX, February 1982.

"Air Sampling at 52 Asbestos Abatement Projects," paper presented at the American Industrial Hygiene Conference, Philadelphia, PA, May 1983.

"Use of Chloride-Containing Aerosol for Source Recognition During an Indoor Air Quality Contamination," with W.H. Spain, A.A. Block, and W.A. Orenstein; paper presented at the American Industrial Hygiene Conference, Detroit, MI, May 1984.

"Health Issues and Legal Aspects of Asbestos Exposure in Buildings," Strategic Planning for Cogeneration and Energy Management: Proceedings of the 8th World Energy Engineering Congress, Atlanta, GA, with E. Clay and W.H. Spain, 1985.

"Determining Emissions from Negative Air Machines During Asbestos Abatement Projects," with E. Clay, W.H. Spain and J. Hubbard, paper presented at the 1985 American Industrial Hygiene Conference, Las Vegas, NV, May 1985.

"Field Testing of High Efficiency Respirator Filters Against Airborne Asbestos Fibers," with E. Clay, W.H. Spain, and J. Hubbard, paper presented at the 1985 American Industrial Hygiene Conference, Las Vegas, NV, May 1985.

"Asbestos Abatement Disposal Techniques and Airborne Exposures for Contractor Personnel," with W.H. Spain and E. Clay, paper presented at the 1985 American Industrial Hygiene Conference, Las Vegas, NV, May 1985.

"Asbestos Policy During the Carter Administration," paper presented at the Jimmy Carter Presidential Library, Atlanta, GA, May 1987.

"Asbestos Exposure During and Following Cable Installation in the Vicinity of Fireproofing," with J. Chesson, T. Dawson, et al., paper presented at the 1991 American Industrial Hygiene Conference, Salt Lake City, UT, May 1991.

"An Investigation of Airborne Asbestos Concentrations During Custodial and Maintenance Activities in a Boiler Room," with E. Ewing, S. Hays, et al., paper presented at the 1992 American Industrial Hygiene Conference, Boston, MA, June 1992.

"An Equation to Express the Decay of Airborne Chrysotile Concentrations," with J. Millette and D. Keyes, poster paper presented at the Health Effects Institute - Asbestos Research Operations and Maintenance Workshop, Cambridge, MA, March 1993.

"Baseline Studies of Asbestos Exposure During O&M Activities," with D. Keyes, S. Hays, et al., paper presented at the Health Effects Institute - Asbestos Research Operations and Maintenance Workshop, Cambridge, MA, March 1993.

"Observations of Fiber Release From Asbestos-Containing Floor Tile," with T.A. Dawson, J.R. Millette, presented at the American Industrial Hygiene Conference, San Diego, CA, June 2002.

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"Libby...A Historical Perspective," ASTM 2002 Johnson Conference, Johnson State College, Johnson, VT, July 21-25, 2002

"Asbestos in Settled Dust Concentrations Outdoors in New York City Before September 11, 2001," ASTM 2002 Johnson Conference, Johnson State College, Johnson, VT, July 21-25, 2002

#### *Publications*

Ewing, W.M., "Clearance Sampling and the Fiber Counting Method," *National Asbestos Council Newsletter*, Vol. 1, No. 2 (June 1983).

Ewing, W.M. and W.H. Spain, "Getting to the Very Fiber of Industrial Asbestos Removal," *Occupational Health and Safety*, Vol. 53, No. 6 (June 1984).

Spain, W.H., W.M.Ewing, and E.M. Clay, "Knowledge of Causes, Controls and Prevention of Heat Stress," *Occupational Health and Safety*, Vol. 54, No. 4 (April 1985).

Ewing, W.M., et al., "Alternatives to Asbestos-Containing Products," *Occupational Health and Safety*, Vol. 54, No. 5 (May 1985).

Clay, E.M., W.H. Spain, and W.M. Ewing, "Health and Safety Needs Detailed in New Asbestos Abatement Survey," *Occupational Health and Safety*, Vol. 54, No. 8 (August 1985).

Block, A.B., W.A. Orenstein, W.M. Ewing, et al., "Measles Outbreak in a Pediatric Practice: Airborne Transmission in an Office Setting," *Pediatrics*, Vol. 75, No. 4 (April 1985).

Clay, E.M., M. Demyanek, W.M. Ewing, and W.H. Spain, "Protective Clothing: Its Necessity and Use," *National Asbestos Council Journal*, Vol. 2, No. 2 (1985).

Ewing, W.M., "History, Implementation and Evaluation of the Asbestos School Hazard Detection and Control Act of 1980," *National Asbestos Council Journal*, Vol. 4, No. 2 (1986).

Spain, W.H., E.M. Clay, W.M. Ewing, and M. Demyanek, "Protective Clothing, A Worthwhile Precaution for Asbestos Workers," *Occupational Health and Safety*, Vol. 55, No. 8 (August 1986).

Ewing, W.M. and D. W. Mayer, "Final AHERA Regulations Released by the EPA," *National Asbestos Council Journal*, Vol. 5, No. 4 (1987).

Ewing, W.M. and D.W. Mayer, "Under Final AHERA Rule, Schools Must Inspect For, Control Asbestos," *Occupational Health and Safety News Digest*, Vol. 4, No. 1 (January 1988).

Spain, W.H., E.M. Clay, and W.M. Ewing, "Special Problems with Respirators for Asbestos Abatement," *ECON*, Vol. 3, No. 9 (September 1988).

Clay, E.M., W.H. Spain, and W.M. Ewing, "Local and State Regulations Becoming More Specific for Glovebag Procedures," *Asbestos Issues* (September 1988).

Spain, W.H., W.M. Ewing, and N.P. Wickware, "Asbestos Floor Tile Removal," *Asbestos Issues*, Vol. 2, No. 9 (September 1989).

Hutton, M.D., W.W. Stead, G.M. Cauthen, A.B. Block, and W.M. Ewing, "Nosocomial Transmission of Tuberculosis Associated With a Draining Abscess," *Journal of Infectious Disease*, Vol 161 (February 1990).

Millette, J.R., W.M. Ewing, and R. Brown, "Stepping on Asbestos Debris," *Microscope*, Vol. 38, pp. 321-326 (1990).

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Millette, J.R., R. Brown, and W.M. Ewing, "A Close Examination of Asbestos-Containing Debris," *National Asbestos Council Journal*, pp. 38-40 (Fall 1990).

Keyes, D.L., J. Chesson, W.M. Ewing, et al., "Exposure to Airborne Asbestos Associated with Simulated Cable Installation Above A Suspended Ceiling," *American Industrial Hygiene Association Journal*, Vol. 52 (November 1991).

Keyes, D.L., J. Chesson, S.M. Hays, R.L. Hatfield, W.M. Ewing, et al., "Re-entrainment of Asbestos From Dust in a Building with Acoustical Plaster," *Environmental Choices Technical Supplement*, Vol. 1, No. 1 (1992).

Ewing, W.M., J. Chesson, T. Dawson, et al., "Asbestos Exposure During and Following Cable Installation In the Vicinity of Fireproofing," *Environmental Choices Technical Supplement*, Vol. 2, No. 1 (1993).

Ewing, W.M., "ASTM Sponsors Boulder Conference on Lead," *Environmental Choices*, Vol. 2, No. 5 (1993).

Keyes, D.L., W.M. Ewing, et al., "Baseline Studies of Asbestos Exposure During Operations and Maintenance Activities," *Appl. Occup. Environ. Hyg.*, Vol. 9, No. 11 (1994).

Ewing, W.M., T.A. Dawson, G.P. Alber, "Observations of Settled Asbestos Dust in Buildings," *EIA Technical Journal*, Vol. 4, No. 1 (July 1996).

Ewing, W.M., et al., *Georgia Building Authority Indoor Air Quality Manual*, Georgia Building Authority, Atlanta, GA (May 1997).

Ewing, W.M., "Further Observations of Settled Asbestos Dust in Buildings," in *Advances in Environmental Measurements for Asbestos* by M.E. Beard and H. L. Rook (Editors) ASTM Publication STP 1342, West Conshohocken, PA (1999), pp. 323-332.

Ewing, W.M., et al., *Lead Hazard Evaluation and Control in Buildings*, ISBN 0-8031-2086-9, ASTM Stock Number MNL38, ASTM, West Conshohocken, PA (2000)

Millette, J.R., et al., "Examination of Asbestos Floor Tile by White Light Interference Microscopy and Scanning Electron Microscopy," *Microscope*, Vol. 50, No. 4 (2002) pp. 173-177.

Harris, M.K., et al., "Manganese Exposures During Shielded Metal Arc Welding (SMAW) in an Enclosed Space," *J. Occup. And Environ. Hyg.*, Vol. 2 (2005) pp. 375-382.

Ewing, W.M. and M.K. Harris, "Manganese and Welding Fume," *The Academy of Industrial Hygiene Diplomat*, Vol. 5, No. 2 (2005).

#### ***Book Reviews***

Thomas, J.D.R. (editor), Ion-Selective Reviews (Vol. 1, No. 1), *American Industrial Hygiene Association Journal*, Vol. 42, No.4 (April 1981).

National Council on Radiation Protection and Measurements, Quantitative Risk in Standard Setting, *American Industrial Hygiene Association Journal*, Vol. 43, No. 2 (February 1982).

State Planning Council (Washington, DC), The Interim Report of the State Planning Council on Radioactive Waste Management, *American Industrial Hygiene Association Journal*, Vol. 43, No. 1 (January 1982).

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American Conference of Governmental Industrial Hygienists, Advances in Air Sampling, *American Industrial Hygiene Association Journal*, Vol. 50, No. 5 (May 1989).

Revised December 1, 2005

**TRIAL LIST FOR  
WILLIAM M. EWING, CIH  
2002-2007**

DATE	CASE NAME	JURISDICTION	CASE NUMBER
2002	Marvin Boede, et al. v. Wisconsin Electric Power Company, et al.	Milwaukee County Circuit Court, WI	98-CV-006561
2002	In RE: Asbestos Personal Injury Litigation – West Virginia	Circuit Court of Kanawha County, WV	01-C-9002
2002	Billy Joe Engle, et al. v. Bechtel Corp., et al.	Circuit Court of Madison County, IL	00 L 1120
2003	Dorothy Turner, et al. v. ABB Lummus Global Inc., et al.	Circuit Court of Lawrence County, IL	2000-L-16
2003	Paula A. Kubik v. John Crane, Inc., et al.	Court of Common Pleas, Trumbull County, OH	2001CV1319
2003	Board of Education of Detroit v. The Celotex Co., et al.	Circuit Court of Wayne County, MI	84-429634 NP
2003	Gina Neimeier, et al. v. A.C. and S., et al.	San Francisco Superior Court	CGC 02-410294
2003	Steven J. Lukac v. John Crane, Inc.	Court of Common Pleas, Trumbull County, OH	01-CV-1318
2003	Phillip Hoeffler, Jr. v. A.W. Chesterton Co., et al.	San Francisco Superior Court	No. 413073
2004	Sally Louise Nolan, et al. v. John Crane, et al.	U.S. Circuit Court, Vermilion County, IL	01-L-117
2004	Georgia Carol Davis, et al. v. Garlock, Inc., et al.	113 <sup>th</sup> Judicial District Court, Harris County, TX	2002-28497
2004	Eric Peoples and Cassandra Peoples v. International Flavors and Fragrances, Inc., et al.	Jasper County Circuit Court, Jasper, MO	01CV683025-07
2004	Linda Redman v. International Flavors and Fragrances, Inc., et al.	Jasper County Circuit Court, Jasper, MO	01CV683025
2004	Marcella J. DeJohn v. Westinghouse and Commonwealth Edison of Illinois	Circuit Court of Cook County, Illinois	98 L 13222
2004	Ernst R. Kruger & Brigitte Kruger v. A.C. & S., Inc., et al.	San Francisco Superior Court	CGC 03-427234
2004	James G. Barone, et al. v. John Crane, Inc., et al.	Court of Common Pleas Trumbull County, OH	2003 CV 473
2005	Ronald Presler and Patsy Presler vs. The Lincoln Electric Co., et al.	Brazoria County, TX District Court	23472-BH03
2005	Anthony Cadlo and Maxlyn Cadlo vs. Asbestos Defendants (BHC)	San Francisco Superior Court	No. 412325
2005	Clyde W. Townsend, et al. V. Eastern Chemical Waste Systems, et al.	Platte County, MO Circuit Court	0694 CC01865
2006	Arnold Norris, et al. v. Sprinkmann Sons Corp., et al.	Milwaukee County Circuit Court	05-CV-009475

Updated January 9, 2006

**DEPOSITION LIST FOR  
WILLIAM M. EWING, CIH  
2002-2007**

DATE	CASE NAME	JURISDICTION	CASE NUMBER
2002	In RE: Asbestos Personal Injury Litigation – West Virginia	Circuit Court of Kanawha County, WV	01-C-9002
2002	State of Illinois v. United States Gypsum, et al.	Circuit Court of Sangamon County, IL	98-L-0061
2002	Several personal injury (mesothelioma) cases	Superior Court, County of San Francisco, CA	Not known
2002	Armstrong Bankruptcy (Illinois, LAUSD)	Federal Bankruptcy Court, Delaware	Not known
2002	Lucy Choate v. ? (personal injury)	New Orleans, LA	Not known
2002	Jax Carroll, et al. v. A.C. and S., et al.	San Francisco Superior Court	CGC 02-409643
2002	Paula A. Kubik v. John Crane, Inc., et al.	Court of Common Pleas, Trumbell County, OH	2001CV1319
2002	Dorothy Turner, et al. v. ABB Lummus Global Inc., et al.	Circuit Court of Lawrence County, IL	2000-L-16
2002	Dorothy Coffie v. SCAPA, Inc.	State Board of Workers' Compensation (GA)	Claim No. 258-44-8180
2002	John H. Olson, et al., v. A.C. and S., et al.	San Francisco Superior Court	CGC 02-408324
2002	Martin Mullis, et al. v. A.C. and S., et al.	San Francisco Superior Court	CGC 02-408747
2002	Patrick A. Engle, et al. v. A.P. Green Industries, Inc., et al.	Circuit Court of Madison County, IL	00L1120
2002	Paul Coen, et al. v. Combustion Engineering, Inc., et al.	Circuit Court of Milwaukee County, WI	01-CV-8218
2002	Richard Halama v. Wisconsin Electric Power Company, et al.	Circuit Court of Milwaukee County, WI	02CV001033
2003	Forbes, et al. v. ? (asbestos personal injury)	California, San Francisco (?)	?
2003	Gina Neimeier, et al. v. A.C. and S., et al.	San Francisco Superior Court	CGC 02-410294
2003	Board of Education of Detroit v. The Celotex Co., et al.	Circuit Court of Wayne County, MI	84-429634 NP
2003	D'Arcy Richardson, et al. v. A.W. Chesterton, Inc., et al.	San Francisco Superior Court	411448
2003	Gary L. Koontz, et al., v. A. W. Chesterton, et al.	Marion County, IN Superior Court	49D02-9601-MI-001-688
2003	Diedrich v. A.P. Green Industries, Inc., et al.	San Francisco Superior Court	?
2003	Gaither vs. A.P. Green Industries, Inc., et al.	San Francisco Superior Court	?
2003	Hilda Adams, et al. vs. Combustion Engineering, et al.	Milwaukee County Circuit Court	02-CV-001033
2003	W.R. Grace & Co. ZAI Science Trial	Federal Bankruptcy Court, Delaware	Not Known
2003	Mary Lou Chalmers, et al. v. Industrial Insulations, Inc., et al.	Circuit Court of Jackson County, Independence, Missouri	01CV224624
2003	Davis & Robinson v. Garlock, Inc., et al.	Harris County, TX District Court	2002-28497
2003	Ferry, et al. v. Constair, et al.	Orange County, FL Circuit Court	CJO-01-216
2003	Phillip Hoeffler, Jr. v. A.W. Chesterton Co., et al.	San Francisco Superior Court	No. 413073

2003	Adams, et al. v. A. W. Chesterton, et al.	Little River County Arkansas Circuit Court	CIV-2000-32
2003	Asbestos Personal Injury Litigation	Kanawha County, WV Circuit Court	02-C-9004
2003	Linda Zylka, et al. v. Wisconsin Electric Power Co., et al.	Milwaukee County Circuit Court	No. 01-CV-010261
2003	Stephen Hill, et al. v. A. C. & S., et al.	District Court of Harison County Texas	No. 01-0076
2003	Sally Louise Nolan, et al. v. John Crane, et al.	U.S. Circuit Court, Vermillion County, IL	01-L-117
2003	Marcella J. DeJohn v. Westinghouse and Commonwealth Edison of Illinois	Circuit Court of Cook County, Illinois	98-L-13222
2004	Mary Harris and Cal Harris v. Alta Building Material Co., et al.	San Francisco Superior Court	COC-03-423593
2004	Eric Peoples and Cassandra Peoples v. International Flavors and Fragrances, Inc., et al.	Jasper County Circuit Court, Jasper, MO	01CV683025-07
2004	Ferry, et al. v. Constar, Inc., et al.	Circuit Court of Orange County, FL	C10-01-216
2004	Ronald Presler, et al. v. The Lincoln Electric Co., et al.	23 <sup>rd</sup> Judicial District Court of Brazoria County, TX	23472 BH 03
2004	Joseph R. Thompson v. Welco Manufacturing Co., et al.	Jackson County Circuit Court, Kansas City, MO	01-CV-217891
2004	Betty Pollman, et al. v. Sprinkman & Sons of Illinois, et al.	5 <sup>th</sup> Judicial Circuit Court, Vermillion County, IL	01 L 146
2004	Jerrold Braley v. Rapid American Corp., et al.	Travis County District Court, TX	GN-203572
2004	Ernst and Brigitte Kruger v. A. C. and S., Inc., et al.	San Francisco Superior Court	CGC 03-427234
2004	Norma Nevels, et al. v. A.W. Chesterton, Inc., et al.	Jackson County Circuit Court, Kansas City, MO	03-CV-209171
2004	Steven J. Lukac v. GATX Corp., et al. and Paula A. Kubic v. GATX., et al.	US District Court for the Northern District of Ohio, Eastern Division	1:01CV20000 1:01CV20001
2004	Anthony Cadlo vs. Asbestos Defendants (BHC)	San Francisco Superior Court	No. 412325
2004	Thomas Crean, et al. v. A.C. and S., Inc., et al.	San Francisco Superior Court	?
2004	Bradley Folse and Jeannie Folse v. Transocean, Inc., et al.	Civil District Court, Parish of Orleans, LA	No. 03-10602, Division C
2004	Mary Brown v. A.C. and S., Inc., et al.	Oklahoma City District Court, OK	CJ-2001-10009-63
2004	James G. Barone, et al., v. John Crane, Inc., et al.	Court of Common Pleas Trumbull County, OH	2003 CV 473
2004	James Benjamin Elder and Charlotte Ann Elder vs. General Electric Co., et al.	Circuit Court of Kanawha County, WV	03-C-9600
2005	Charles E. Thornton and Mary M. Thornton vs. General Electric Co., et al.	Circuit Court of Kanawha County, WV	03-C-9600
2005	Jacqueline Hoover, et al., v. A.C. and S., et al.	San Francisco Superior Court	CGC 02-414652
2005	Arita Cullison, et al., v. A.W. Chesterton Co., et al.	Travis County, TX District Court	
2005	Robert M. Johnson, et al., v. Daimler Chrysler Corp., et al.	Jackson County, MO Circuit Court	04CV219314
2005	Dorothy Randall v. Allied Manufacturing Co., et al.	Jackson County, MO Circuit Court	03CV229165
2005	Multidistrict Litigation v. Lincoln Electric Co., et al.	Cleveland, OH Federal Court	
2005	Robert Pozarski & Cleo Pazarski v. Bird, Inc., et al.	Eau Claire County, WI Circuit Court	03-CV-778



2005	In Re: Asbestos Personal Injury Litigation (May 2005 Trial Group)	Kanawha County, WV Circuit Court	03-C-9600
2005	Clyde W. Townsend, et ux. V. Eastern Chemical Waste Systems, et al.	Platte County, MO Circuit Court	0694 CC01865
2005	Oliver E. Dodson, Jr., et al. v. ACF Industries, Inc., et al.	Jackson County, MO Circuit Court	0516CV09978
2006	In Re: Asbestos Personal Injury Litigation (January 2006 Trial Group)	Kanawha County, WV Circuit Court	03-C-9600
2006	Gennaro Manfredi, Jr., et al., v. Bondex International, Inc., et al.	Jackson County, MO Circuit Court	04CV225886
2006	John Pisani and Marcella Pisani v. AC and S, Inc., et al.	Alameda County Superior Court	RG 04141585
2006	Clair Miller and Pauline Miller v. A.C. and S, Inc., et al.	San Francisco Superior Court	CGC-05-444903
2006	Lawrence Campbell and Martha Campbell v. Alta Building Material Co., et al.	San Francisco Superior Court	CGC-05-445030
2006	Dewey Hodson, et al. v. Insulation, Inc., et al.	Tulsa County District Court	CJ-2004-07511
2006	In Re: Asbestos Personal Injury Litigation (May 2006 Trial Group)	Kanawha County, WV Circuit Court	CV03C9600, et al.
2006	Joseph and Martha Kadivnik v. A.W. Chesterton company, et al.	Marion County, IN Superior Court	49D02-9801-MI-0001-304
2006	E. June Clark and James Clark v. ABB, Inc., et al.	Marion County, IN Superior Court	49D02-9601-MI-001-798
2006	Henry A. Antczak and Martha M. Antczak v. Certainteed Corp., et al.	Milwaukee County Circuit Court	04-CV-6814
2006	Arnold Norris, et al. v. Sprinkmann Sons Corp., et al.	Milwaukee County Circuit Court	05-CV-009475
2006	Imelda Druke, et al., v. American Standard, Inc., et al.	Milwaukee County Circuit Court	04-CV-762
2006	Kevin Remmes v. International Flavors & Fragrances, Inc., et al.	U.S. District Court, Northern District of Iowa, Western Division	C04-4061-MWB
2006	Timothy Arthur, et al. v. International Flavors & Fragrances, Inc., et al.	Court of Common Pleas Hamilton County, OH	A0307157
2006	In Re: Asbestos Personal Injury Litigation (Sept. 2006 Trial Group)	Kanawha County, WV Circuit Court	CV03C9600
2006	Forrest F. Christian, et al., v. Albany International Corporation, et al.	Superior Court, King County, WA	06-2-02421-4 SEA
2006	Christopher Pounds and Teresa Pounds v. A.W. Chesterton, Inc., et al.	San Francisco Superior Court	447748
2006	Joseph Boyd, et al. v. Lincoln Electric Co., et al.	Court of Common Pleas Cuyahoga County, OH	545413
2006	Gene Fittshur, et al. v. Acoustech Supply, Inc., et al.	Milwaukee County Circuit Court	05-CV-009662
2006	Vicki Tatera, et al. v. Union Carbide Corporation, et al.	Milwaukee County Circuit Court	04-CV-008167
2006	Eudelia Longoria Pinedo, et al. v. AC & S, Inc., et al.	San Francisco Superior Court	CGC 04-433247
2006	Paul Whitlock, et al. v. A.W. Chesterton, et al.	San Francisco Superior Court	06-4491213
2007	Frances Boyle, et al. v. AC & S, Inc., et al.	San Francisco Superior Court	CGC 02-403988

Note: I am certain there are some additional short telephonic depositions not included in the above list. Any depositions not included are regarding a plaintiff with mesothelioma where the issue related to past asbestos exposure. No deposition testimony was intentionally excluded from the above list. - W.M. Ewing Updated January 9, 2007